

REMARKS

In the pending Office Action, claims 128, 130-133, 135-139 and 147-149 were rejected as being anticipated by Pirritano (U.S. Pat. 6,620,057) or alternatively were rejected as being obvious over Pirritano in view of Kuesters (U.S. Pat. 6,113,504). Claims 134 and 140-141 were rejected as being obvious over Pirritano in view of Kuesters and Masters (U.S. Pat. Pub. 2003/0017884).

In this response all independent claims (128, 136 and 148) have been amended after careful consideration of the Examiner's position, particularly with respect to the anticipation rejection based on Pirritano.

It appears that the Examiner interprets the gap in Pirritano's loop antenna as a capacitor and construes the gap as both the claimed void and the claimed electronic component or claimed semiconductor component in the claimed void. Hence, in the Examiner's construction, Pirritano's gap is being equated to two elements in the claims. While it is appropriate to interpret Pirritano's gap to be a capacitor, that gap is NOT a void in the outer spherical surface of a spherical object. For at least this reason as well as other reasons provided below, Pirritano does not anticipate the claims.

Pirritano does have a spherical object--it lies underneath the loop antenna, but there is no void in that spherical object. Pirritano goes through the effort of removing the KAPTON substrate in the center of the loop antenna (see col. 15, lines 42-45) in order to conform the loop to the "spherical radius of a golf ball and to lie tangent to the ball core surface." *Id.* Hence, in Pirritano, the spherical object is UNDER the loop antenna, and there is no disclosure in Pirritano of a void recessed below the outer surface of the spherical object. The loop antenna is placed on top of Pirritano's ball core surface, and hence any "void" which is construed to be the gap in the loop is in fact NOT recessed below the outer spherical surface of the ball's core material. ALL

independent claims require that the void, which receives an electronic component, be recessed below the outer spherical surface, and hence all claims are not anticipated for at least this reason.

There are at least several other reasons why the claims are not anticipated by Pirritano.

For purposes of explanation, claim 136 will be used to convey those reasons.

Claim 136 states:

136. (Currently Amended) A golf ball, comprising:
- a spherical object having a first void ~~on~~ recessed below an outer surface of said spherical object wherein the base of the first void is solid and closed, the spherical object having a center which is the center of the golf ball;
 - a first antenna configured to transmit an RF signal, the first antenna being disposed on the outer surface;
 - a first semiconductor having at least a portion disposed within said first void, the first semiconductor having a first contact pad and having a second contact pad and being coupled to the first antenna through the first contact pad and the second contact pad;
 - an adhesive material between the base of said first void and said first semiconductor, and wherein the first semiconductor has a first surface disposed adjacent to and facing the base of the first void and coupled to the base by the adhesive material, and wherein the first semiconductor has a second surface which is parallel with and opposite to the first surface, and wherein the second surface is adjacent to the outer surface of the spherical object at an upper end of the void which is adjacent to the outer surface, and wherein the first surface of the first semiconductor faces inwardly toward the center of the golf ball and the second surface of the first semiconductor faces outwardly away from the center of the golf ball and wherein the first antenna is coupled to the first contact pad and to the second contact pad, and wherein the first contact pad and the second contact pad face outwardly away from the center of the golf ball along a radius from the center of the golf ball, and wherein a portion of the first antenna extends over the first void to couple to the first and the second contact pads; and
 - a shell that encloses said spherical object.

Applicant first notes that the claim requires “a first semiconductor” in the void. There is no semiconductor in Pirritano and there is no semiconductor having at least a portion in the first void in Pirritano. Therefore, Pirritano cannot anticipate claim 136 (and other claims requiring a “semiconductor”). Pirritano discloses two materials for the loop--a conductor (copper), which is

NOT a semiconductor, to form the loop and a dielectric (see col. 6, lines 25-28) material, which is also NOT a semiconductor. As is known in the art, a semiconductor is NOT a dielectric. Transistors and diodes are formed from a semiconductor; they would not work if they were formed out of a dielectric.

Claim 136 requires that the semiconductor have a first contact pad and a second contact pad, both of which couple the first semiconductor to the first antenna. Furthermore, the claim requires that the contact pads be on the second surface of the semiconductor which faces outwardly away from the center of the golf ball along a radius from the center, and the claim requires that a portion of the first antenna extends over the first void to couple to the two contact pads. These limitations are supported by, inter alia, paragraph 69 (disclosing contact pads 152 and 153) and figures 4B. These limitations are totally absent from Pirritano and from Kuesters. In Pirritano, the Examiner may take the position that the end faces of the loop antenna both form a gap (and hence a void) and also form “contact pads.” Whether or not these faces can be construed as contact pads is moot because they are not disposed on a surface which faces outwardly away from the center of the golf ball along a radius from the center. These faces are along a tangent on the spherical surface of Pirritano’s ball core; they are not facing outwardly away from the center of the ball along a radius from the center. Moreover, the claim requires that a portion of the first antenna extends over the first void to couple to the two contact pads. Pirritano cannot disclose this feature as it would destroy the functionality of Pirritano’s carefully crafted and tuned gap. Pirritano clearly states that the gap must be correctly sized in order for the loop antenna to work; in fact, Pirritano goes through the effort of laser trimming each loop gap to achieve a precise frequency. See Pirritano at col. 15, lines 37-42. The loop antenna cannot extend into the void, otherwise it will not function properly.

Kuesters and Masters also fail to disclose these limitations and hence the combination of Pirritano and Kuesters and Masters does not disclose all of the features of each of the independent claims, and therefore there is no proper prima facie case for obviousness. Hence, the rejection of anticipation or obviousness should be withdrawn for claim 136 and its dependents. Claims 128 and 148 also include similar limitations about the contact pads facing outwardly away from the center of the ball and the antenna extending into the void to couple to the contact pads, and therefore claims 128 and 148 and their dependent claims should be allowed.

In view of the foregoing, all claims are clearly not anticipated and they are not obvious.


Request for Extension of Time

Applicant hereby petitions for an extension of time to respond to the pending Office Action. Please charge Deposit Account No. 02-2666 in the amount of \$130.00 for this extension. Furthermore, please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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James C. Scheller, Jr.
Reg. No. 31,195

1279 Oakmead Parkway
Sunnyvale, California 94085-4040
(408) 720-8300